

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

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The following titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

Astrophysical journal. Chicago. v. 50. July, 1919.

Meggers, W. F., & Peters, C. G. Measurements on the index of refraction of air for wave-lengths from 221SA to 9000A. p. 56-71.

Franklin Institute. Journal. Philadelphia. v. 188. 1919.

Jones, Loyd A. The low visibility phase of protective coloration. p. 363-387; 507-533. (Sept., Oct.). [Discusses weather factors and describes a visibility-meter].

Humphreys, W[illiam] J[lackson]. Optics of the air. p. 433-488. (Oct.)

Aeronautics Staff, U. S. N. Air-speed indicators for dirigibles. p. 535-544. (Oct.)

Geographical review. New York. v. 8. August, 1919.

Taylor, Griffith. The settlement of tropical Australia. p. 84-115. [Part of "Geographical factors controlling the settlement of tropical Australia" (Queensland Geogr. Journ.). Includes extensive discussion of climate.]

London, Edinburgh, and Dublin philosophical magazine. London. v. 38. September, 1919.

Rayleigh. The traveling cyclone. p. 420-424. [Abstract, p. 644, above.]

Physical review. Lancaster. v. 14. October, 1919.

Stewart, C. W. Propagation of sound in an irregular atmosphere. p. 376-378.

Popular science monthly. New York. v. 95. October, 1919.

Jostling the clouds to change the weather. Rain-makers, hail-preventers and their strange devices. p. 72-74.

Royal astronomical society of Canada. Journal. Toronto. v. 13. July-August, 1919.

Stupart, Frederic. The variability of corresponding seasons in different years. p. 259-263.

Science. New York. v. 50. 1919.

Knowlton, A. A. An unusual mirage. p. 328. (Oct. 3.)

Brooks, Charles F. Agricultural meteorology. p. 350-351. (Oct. 10.) [Review of recent work in the U. S.]

Talman, C[harles] F[itzhugh] & others. Snow rollers. p. 371-372. (Oct. 17.)

Brooks, Charles F. The trans-Atlantic flights and ocean weather maps. p. 374-375. (Oct. 17.)

Scientific American. New York. v. 121. October 4, 1919.

Keeping track of winds for the airmen. p. 339.

Symons's meteorological magazine. London. v. 54. September, 1919.

Gold, [E.] Unification of the British meteorological services. p. 86-88. [See pp. 650-651, above.]

Ridpath, C. H. E. Notes on the climate of Mesopotamia. p. 90-91.

Belgian. Observatoire royal. Annales. Bruxelles. Tome 6.

Somville, O. Contribution à l'étude des mouvements microsismiques. p. 1-48. (fasc. 1. 1914.)

Somville, O. De la différence de phase entre les mouvements du pendule et du galvanomètre dans l'enregistrement des ondes sismiques par la méthode électromagnétique. p. 143-159. (Fasc. 2. 1918.)

Revue du ciel. Bourges. 4me. année. Octobre, 1919.

Bouant, Émile. Les feux follets. p. 705-707.

Secretaría de Agricultura, comercio y trabajo. Boletín mensual. Méjico. Tome 4. Enero-febrero, 1919.

Bustamante, Octavio. Las lluvias en los años de 1917 y 1918. p. 17-20.

Egata. Porto Alegre. v. 5. Agosto, 1919.

Couscierat de Araujo, L. Invernos frios e invernos quentes. p. 78-80.

Astronomische Nachrichten. Kiel. Band 203. no. 14. 1916.

Stentzel, A. Die neue Dämmerungsanomalie. Zweite Mitteilung. p. 223-230.

Prussia. Königlich preussisches meteorologisches Institut. Abhandlungen. Berlin. Band 5. 1917.

Dorno, C. Beobachtungen der Dämmerung und von Ringerscheinungen um die Sonne 1911-1917. p. 1-94.

Società meteorologica italiana. Bollettino bimestrale. v. 37. Dicembre, 1917; gennaio-maggio, 1918.

Crestani, Giuseppe. Le cappe. Nota 2. p. 1-9.

Gicres. La legge di Buys-Ballot e il vento in Italia. p. 9-10.

Toller, Francesco. L'aeronavigazione e le correnti aeree. p. 17-32.

Negro, Carlo. Di alcuni aloni osservati in Torino nel 1917. p. 10-16.

SPECIAL OBSERVATIONS.

SOLAR AND SKY RADIATION MEASUREMENTS DURING SEPTEMBER, 1919.

By HERBERT H. KIMBALL, Professor of Meteorology, in charge.

[Dated: Solar Radiation Investigations Section, Washington, Oct. 30, 1919.]

For a description of instrumental exposures and an account of the methods of obtaining and reducing the measurements, the reader is referred to the REVIEW for January, 1919, 47:4.

The monthly means and departures from normal in Table 1 show that radiation measurements averaged close to September normal values at Washington and Santa Fe, slightly above normal at Madison, and slightly below at Lincoln.

Table 3 shows only slight departures from the normal amount of radiation for the month at the three sta-

tions having continuously recording pyrheliometers. At Washington, the Leeds and Northrup recorder heretofore used was replaced by a Callendar recorder on September 27, necessitating a redetermination of the reduction factor for the pyrheliometer.

The skylight polarization measurements made at Washington on 8 days give a mean of 59 per cent, with a maximum of 67 per cent on the 25th. At Madison, measurements made on 12 days give a mean of 67 per cent, with a maximum of 73 per cent on the 12th. These are average values for September.